

PROCEEDINGS  
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BIOLOGICAL SOCIETY OF WASHINGTON

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EIGHT NEW MAMMALS FROM THE UNITED STATES.

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Among the recent additions to the mammal collection of the Biological Survey are a cougar from the desert region bordering the Lower Colorado, below Yuma, Arizona, presented by Herbert Brown; and a large gray fox from New Hampshire, presented by Abbott H. Thayer. Both of these animals appear to be new. In publishing brief diagnoses of them, the opportunity is taken to describe several other unnamed mammals that have been for some years in the collection of the Biological Survey.

***Felis aztecus browni*** subsp. nov.

*Type* from Lower Colorado River 12 miles south of Yuma, Arizona. No. 125,719 ♂ ad., U. S. National Museum, Biological Survey Collection. February, 1903. Collected by Herbert Brown.

*Characters*.—Similar to *aztecus* but slightly smaller and paler, with much smaller and lower audital bullæ, and smaller lateral teeth, particularly the canines and carnassials. The incisors are the same size as in *aztecus*, but the canines are much more slender, and the premolars (except the rudimentary upper one) and carnassials are very much smaller. The upper carnassial measures only 20.5 mm., while in *aztecus* of the same sex (♂) it measures 24 mm. The bullæ are essentially of the same length as in *aztecus* but are narrow and low, lacking the usual inflation.

They measure in transverse diameter, from meatus to front of foramen lacerum posticus, only 16 mm., while those of *aztecus* usually measure 20 mm. or more. The difference in height is equally striking. In color the animal is very much paler and grayer (less red) than *aztecus*.

*Remarks.*—The small size of the bullæ seems to indicate that the Colorado Desert Cougar finds his prey more by sight than hearing; and the slender canines and small lateral teeth indicate that he preys on smaller animals than the deer-killing Cougar of the uplands.

*Measurements* (in flesh).—"Tip of nose to tip of tail 7 ft. 4 in.; tail  $28\frac{1}{2}$  in. Weight 170 pounds."

### *Urocyon cinereoargenteus borealis* subsp. nov.

*Type* from Marlboro, 7 miles from Monadnock, New Hampshire. No. 119,725 ♂ ad., U. S. National Museum, Biological Survey Collection. November, 1902. Abbott H. Thayer.

*Characters.*—Similar to *cinereoargenteus* but decidedly larger, with marked skull and tooth differences. Skull larger and heavier; nasals longer and more slender posteriorly; palate broader; pterygoid fossa much broader, with sides more flaring (less vertical); teeth (particularly the upper molars and last lower premolar, pm  $\frac{x}{4}$ ) slightly larger and decidedly thicker; last upper molar conspicuously larger (outer side 10 mm.), with heel broader and heavier. The 4th lower premolar is larger than in any known member of the genus.

*Cranial measurements.*—(Type specimen ♂ ad.): Basal length 126; basilar length of Hensel 118.5; zygomatic breadth 73; palatal length 63; postpalatal length 55; front of canine to back of last upper molar 56.

### *Urocyon catalinæ* sp. nov.

*Type* from Catalina Island, Santa Barbara Islands, California. No. 45,228 ♂ ad., U. S. National Museum, Biological Survey Collection.

*Geographic distribution.*—Catalina Island, California.

*Characters.*—Similar to *littoralis*, but tail much longer, throat purer white; white of underside of thigh and upper side of hind foot greatly restricted; dusky patch at base of whiskers well defined.

*Cranial characters.*—Skull similar to that of *littoralis*, but nasals narrower and not constricted in the middle; rostrum longer and more slender; anterior ascending arm of jugal thicker; bullæ more inflated and less flattened anteriorly. *Urocyon catalinæ* agrees with *littoralis* and differs from all the others in having the nasals broad posteriorly and obliquely truncate, and the frontal spines short.

*Measurements.*—Male: Total length 795; tail 298; hind foot 112. Female: total length 720; tail 270; hind foot 112. Two specimens weighed in the flesh: ♂ 5 lbs.; ♀  $4\frac{1}{2}$  lbs.

**Urocyon clementæ** sp. nov.

*Type* from San Clemente Island, Santa Barbara Islands, California. No. 92,034 ♂ ad., U. S. National Museum, Biological Survey Collection.

*Geographic distribution.*—San Clemente Island, California.

*Characters.*—Similar to *littoralis*, but dusky patch at base of whiskers much blacker and more sharply defined, with a clean white area between it and base of nose-pad, as in *santacruzæ*; throat clearer white; underside of thigh and upperside of hind foot whitish, in some cases nearly pure white.

*Cranial characters.*—Skull similar to *littoralis*, but smaller; nasals more tapering posteriorly and broadest in the middle (instead of constricted in the middle); rostrum more slender; frontal spines rather long; anterior ascending arm of jugal very broad; bullæ smaller and more inflated; upper carnassial narrower. *U. clementæ* differs from *catalinæ*, its neighbor in the southern group, as follows: size smaller; nasals broader in the middle and more tapering posteriorly; bullæ more inflated (especially anteriorly); carnassial and molar teeth smaller.

*Measurements.*—Average of 6 specimens: total length 688; tail 250; hind foot in dry skin 100.

**Urocyon littoralis santacruzæ** subsp. nov.

*Type* from Santa Cruz Island, Santa Barbara Islands, California. No.  $\frac{34852}{27117}$  ♀ ad., U. S. National Museum, Biological Survey Collection.

*Geographic distribution.*—Santa Cruz Island, California.

*Characters.*—Similar to *littoralis*, but fulvous areas slightly more extensive and more intense; dusky patch at base of whiskers larger and darker; whitish area on underside of thigh and top of hind foot suffused with buffy fulvous; nasals slender and tapering posteriorly.

*Cranial characters.*—Similar to *littoralis*, but skull slightly smaller; nasals much narrower, slender and tapering (instead of expanded) posteriorly, and not constricted in the middle; frontal spines long; rostrum narrower; anterior ascending arm of jugal broader; bullæ smaller, more inflated posteriorly, narrower anteriorly; basioccipital narrower; upper carnassial narrower.

*Measurements.*—Average of 3 specimens: total length 708; tail 266; hind foot 109.

## Cranial measurements of Island Foxes.

|   | <i>littoralis</i> | <i>santacruzæ</i> |      | <i>elementæ</i> |      | <i>catalinæ</i> |      |
|---|-------------------|-------------------|------|-----------------|------|-----------------|------|
|   | ♀ ad.             | ♂                 | ♀    | ♂               | ♀    | ♂               | ♀    |
| Basilar length.                               | 93.5              | 96                | 90   | 94              | 91   | 98              | 95   |
| Palatal length.                               | 49                | 53                | 49   | 50              | 48   | 53              | 50   |
| Postpalatal length.                           | 44                | 43.5              | 40.5 | 43.5            | 43.5 | 45              | 44.5 |
| Zygomatic breadth.                            | 57                | 57.5              | 55   | 56.5            | 55.5 | 60              | 57.5 |
| Breadth of nasals at apex of premaxillæ.      | 7                 | 5.5               | 5.5  | 7.5             | 7    | 6.5             | 7    |
| Upper series of teeth (canine to last molar). | 43.5              | 44.5              | 43   | 45.5            | 44   | 47              | 44   |

*Putorius streatoris leptus* subsp. nov.

*Type* from Silverton, Colorado. No. 56,800 ♂ yg. ad., U. S. National Museum, Biological Survey Collection. October 20, 1893. J. Alden Loring. Original No. 1185.

*Characters*.—Similar to *streatoris* but smaller; black tip of tail very much shorter (projecting only 15 mm. beyond white hairs): Teeth about same size as in *streatoris*, but skull disproportionately smaller; frontals and rostrum more depressed; bullæ smaller and narrower.

*Winter pelage*.—White all over except short black tip of tail. White without yellowish tinge. (Two males from Colorado—the type from Silverton, and another from Crested Butte collected February 17, 1902 by E. R. Warren).

*Summer pelage*.—Upperparts uniform drab brown (or between drab brown and hazel, but lacking the reddish of hazel); end of tail black; underparts white throughout with straight line of demarcation along sides, the white reaching down on underside of legs to wrists and ankles; rest of legs and feet brown like back; toes of forefeet white on upper side; toes of hind feet mixed brown and white. (Young female from Rocky Mountains of Alberta, Canada, near Henry House, July 21, 1896, J. Alden Loring).

*Remarks*.—The animal is nearly as small as *rixosus*, from which it is easily distinguished by the longer tail and black tip, and slightly larger skull and teeth.

*Measurements.*—Type specimen (♂ yg. ad.): total length 243; tail vertebræ 64; hind foot 31. Skull: basal length 31.5; basilar length of hensel 30.5; zygomatic breadth 17.5; interorbital breadth 7.5; palatal length 13; postpalatal length 18; toothrow from front of canine to back of last molar 9.

**Eutamias canicaudus** sp. nov.

*Type* from Spokane, State of Washington. No.  $\frac{27007}{34123}$  ♀ ad., U. S. National Museum, Biological Survey Collection. April 11, 1891. C. P. Streater. Original No. 639.

*Characters.*—Size rather large; ears medium or rather small; tail rather long; general color in spring pelage buffy gray, tail grizzled gray—decidedly grayer (less red) than in neighboring species; outer pair of light stripes strikingly white.

*Color.*—Spring pelage (=left over winter pelage): upperparts, including middle pair of light stripes vinaceous gray, with enough admixture of white-tipped hairs to produce a hoary effect; median, dorsal and lateral pair of black stripes (5 in all) pure black, the outer pair slightly washed with fulvous; upperside of tail grizzled gray, edged with whitish; underside with a median buffy band bordered with black and edged with whitish. Post-breeding pelage: neck, sides and edges of stripes washed with ochraceous or light fulvous.

*Remarks.*—This handsome new species with showy white side stripe is at all seasons easily distinguished from its neighbors, *felix* and *affinis* by the color of the tail, the general tone of which is gray. Both of the others have strikingly red tails, the underside and edges being intense fulvous or ferruginous. The geographic range of the gray-tail chipmunk so far as now known is the ponderosa pine forest of the Transition zone in northern Idaho and the adjoining eastern edge of the State of Washington.

*Measurements.*—Type (♀ ad.): total length 228; tail vertebræ 98; hind foot 32. Average of 6 adults from type locality: total length 229; tail vertebræ 104; hind foot 34.

**Citellus grammurus utah** subsp. nov.

*Type* from foot of Wasatch Mountains near Ogden, Utah. No.  $\frac{4767}{5427}$  ♀ ad., Merriam Collection. October 10, 1888. Vernon Bailey. Original No. 291.

*Characters.*—Similar to *grammurus* but smaller, ears larger, back much redder; head in late summer pelage much more reddish brown; tail darker; nasal bones anteriorly averaging broader, more inflated and more truncate; also slightly longer and projecting posteriorly behind premaxillæ; fronts of incisors paler yellow (in *grammurus* more orange).